USER MANUAL

Xedio Ingest Organizer

Version 4.50 - August 2014

Xedio

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Table of Contents

TABLE OF CONTENTS III

WHAT'S NEW? V

1. INTRODUCTION 1

2. XEDIO INGEST - SERVER 2

3. XEDIO INGEST ORGANIZER - CLIENT 3

3.1. User Interface 3
3.1.1. Opening Ingest Organizer 3
3.1.2. Overview of the Xedio Ingest Organizer Window 4
3.2. Encoder Devices 6
3.2.1. Overview of the Encoders Tab 6
3.2.2. Encoding 7
3.2.3. Encoder 10
3.3. VTR Device 11
3.3.1. Purpose 11
3.3.2. General Tab and Metadata Tab 12
3.3.3. Channel Area 13
3.3.4. VTR Area 13
3.4. Scheduler 14
3.4.1. Purpose 14
3.4.2. Timeline View Settings 14
3.4.3. Timeline Content 16
3.5. Recording TC Versus Media TC 18

What's New?

In the user manual, the icon NEW ! has been added on the left margin to highlight information on new and updated features.

No section has been updated in the Xedio Ingest Organizer manual from Xedio Suite 4.50 (compared to Xedio Suite 4.40).

1. Introduction

The Xedio Ingest application allows a user to control encoder channels to digitize any incoming video into high resolution, low resolution or both simultaneously (a panel of different codecs is available). The Xedio Ingest application can control multiple incoming feeds simultaneously and offers a VGA monitoring feed of the incoming video as it is being encoded.

As a fully integrated part of the Xedio Suite of applications the files are entered into the database as they are being ingested and can be used by other applications in the Suite even before the encoding process has been completed.

The Xedio Ingest is a server/client based system and therefore consists of two elements:

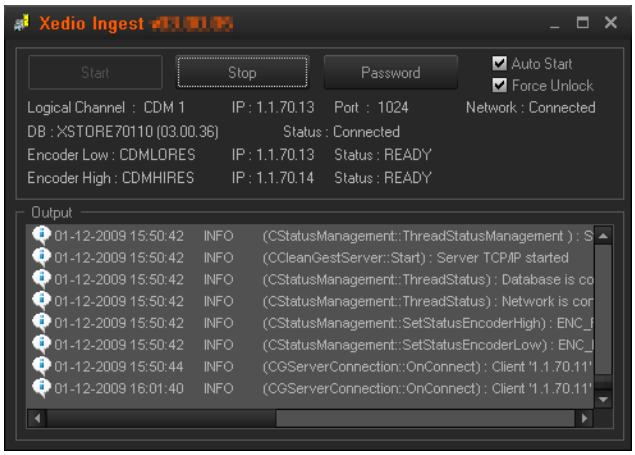
- **Xedio Ingest** (server) – Software which runs on the hardware encoder to enable the control of the ingest process.
- **Xedio Ingest Organizer** (client) – Software which runs on any workstation within the Xedio environment and controls the ingest process of all encoders that are part of the system.

2. Xedio Ingest - Server

The Xedio Ingest (server) application running on a hardware encoder is usually set up to auto start when the computer is switched on. If however it is not set up in this way the program can be started manually. Click on the **Xedio Ingest** icon on the desktop to start the application.

A dialogue box will then appear and ask the user to start the application. At this point a password can be set up and ticking the check box can set the auto start option.

When the application is started the message window shows the progress of the connection to the Client application and displays any problems it may have in the set up.


Xedio Ingest
Start
Stop
Password
Auto Start
Force Unlock
Logical Channel : CDM 1
IP : 1.1.70.13
Port : 1024
Network : Connected
DB : XSTORE70110 (03.00.36)
Status : Connected
Encoder Low : CDMLORES
IP : 1.1.70.13
Status : READY
Encoder High : CDMHIRES
IP : 1.1.70.14
Status : READY
Output
01-12-2009 15:50:42 INFO (CStatusManagement::ThreadStatusManagement) : S
01-12-2009 15:50:42 INFO (CCleanGestServer::Start) : Server TCP/IP started
01-12-2009 15:50:42 INFO (CStatusManagement::ThreadStatus) : Database is co
01-12-2009 15:50:42 INFO (CStatusManagement::ThreadStatus) : Network is cor
01-12-2009 15:50:42 INFO (CStatusManagement::SetStatusEncoderHigh) : ENC_
01-12-2009 15:50:42 INFO (CStatusManagement::SetStatusEncoderLow) : ENC_
01-12-2009 15:50:44 INFO (CGServerConnection::OnConnect) : Client '1.1.70.11'
01-12-2009 16:01:40 INFO (CGServerConnection::OnConnect) : Client '1.1.70.11'

3. Xedio Ingest Organizer - Client

3.1. User Interface

3.1.1. Opening Ingest Organizer

To start the Xedio Ingest Organizer application, select the application from **Start > Programs > EVS Broadcast Equipment** or click on the **Xedio Ingest Organizer** icon on the desktop.

The Xedio workstation may be integrated into an Active Directory domain. In this case, Xedio Ingest Organizer will automatically open without requesting additional access codes when the user starts it.

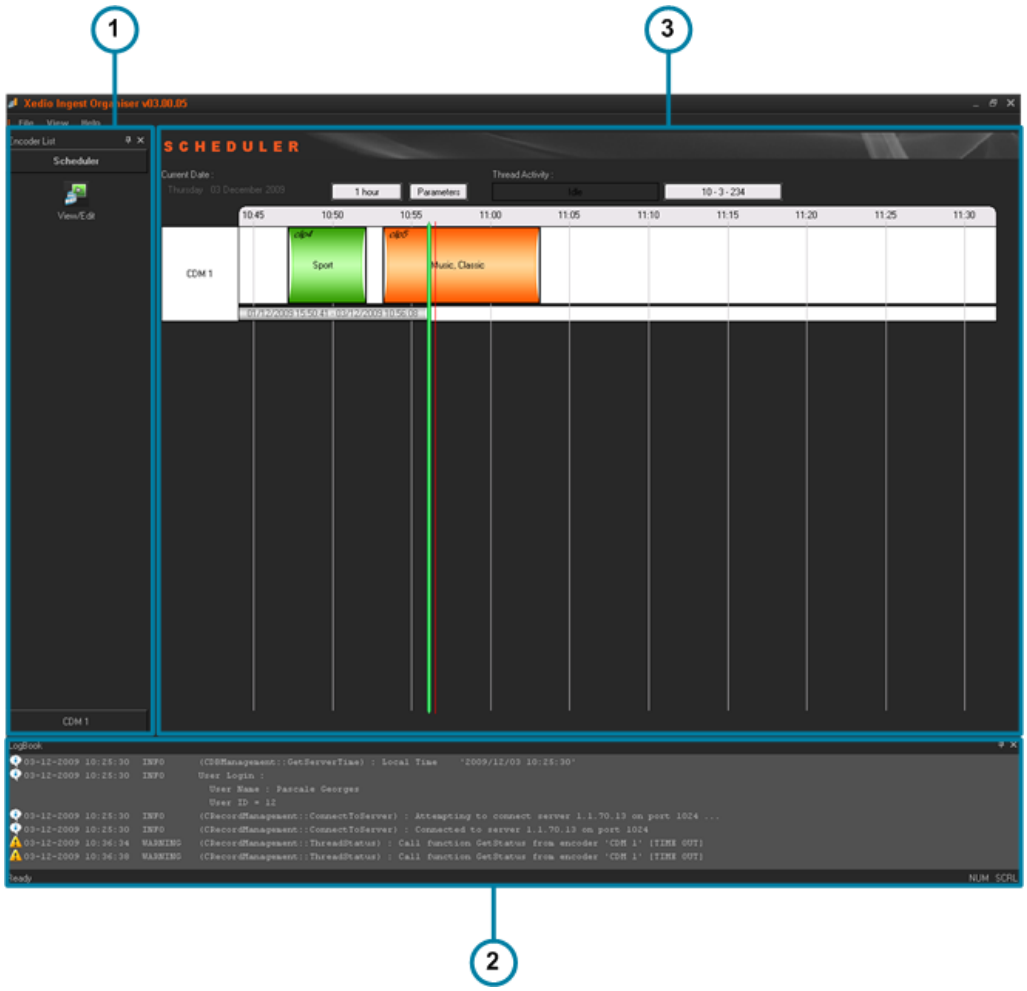
The user group the user belongs to in the Windows domain must be linked to a user role in Xedio Manager. This determines the set of user rights and user settings the user will have in the application. In case a user belongs to several Windows groups, the system retrieve them in alphabetical order and checks whether the first group matches a user role. The use of Windows authentication must have been enabled in Xedio Manager. See the Xedio Manager user manual for more information.

In case the auto-log off mode is activated and the Windows authentication by Active Directory mode is used, the auto-log off becomes an auto-quit function.

If the Xedio workstation is not integrated into an Active Directory domain, a login screen will display, where users have to enter their own Xedio username and password.

3.1.2. Overview of the Xedio Ingest Organizer Window

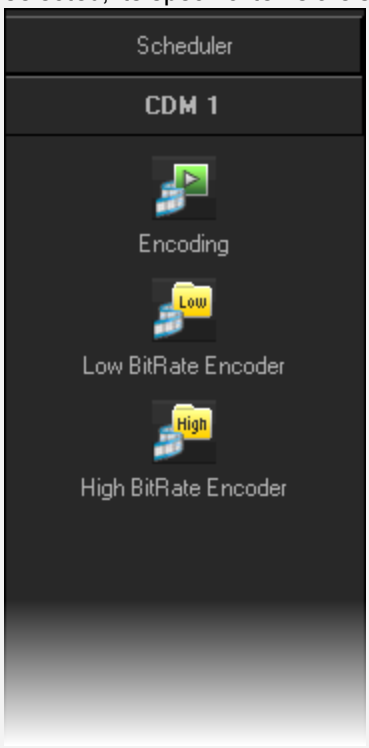
The Xedio Ingest Organizer window contains the areas highlighted on the screenshot below:



Note
The color of some user interface elements may vary with the Xedio skin installed.

Area Description

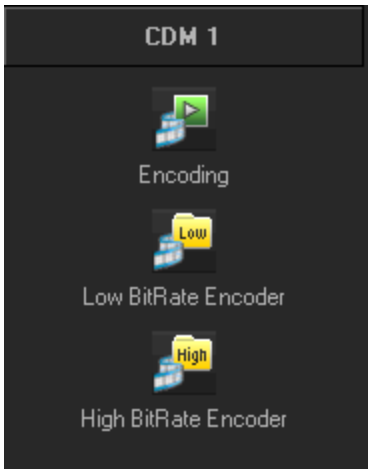
The table below describes the various parts of the Xedio Ingest Organizer window:

Part	Name	Description
1.	Outlook Area	This displays the list of the devices which can be controlled by the Ingest Organizer. The Outlook bar presents at least as many tabs as there are devices to control. Each tab provides access to a series of items. Once a category tab is selected, its specific items are shown as icons.  Select any of these icons to display its relevant interface in the Work area. The set up of encoders and VTR devices is made in the Xedio Manager application.
2.	Work Area	The Work area displays a timeline with the ingests that are scheduled or took place over a period of time for each of the controlled devices. It interactively changes when an item is selected in one category from the Outlook area.
3.	Logbook	This lists the processes undertaken by the software and reports any error encountered during the processes.

3.2. Encoder Devices

3.2.1. Overview of the Encoders Tab

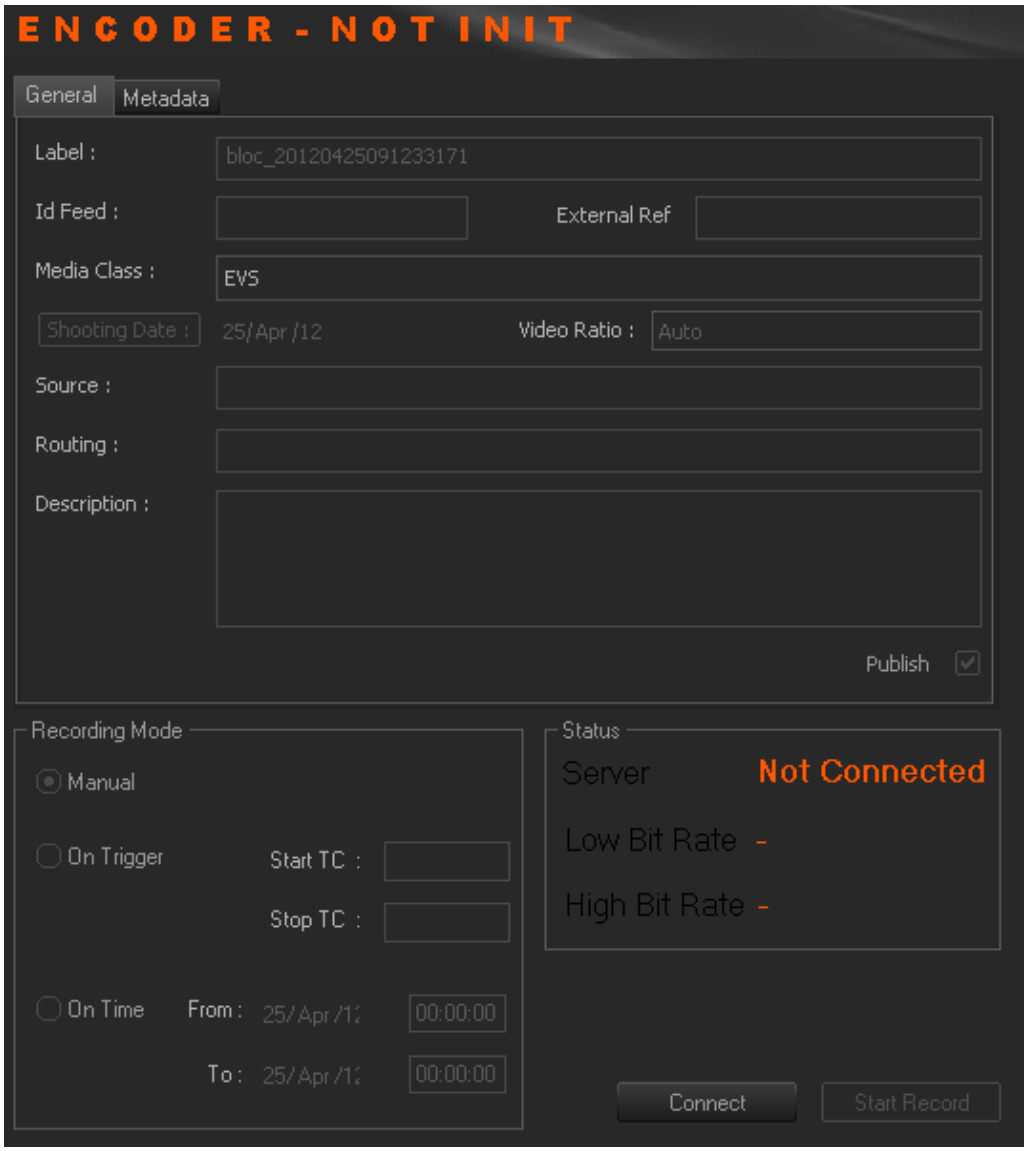
Several items are available in the "Encoders" category. They are detailed below.



3.2.2. Encoding

Purpose

When you click the **Encoding** button for an encoder device, the following Encoder window is displayed in the Work area, allowing you to enter data for the encoded file, to select the method of recording that will be used and to start the recording process.



General Tab

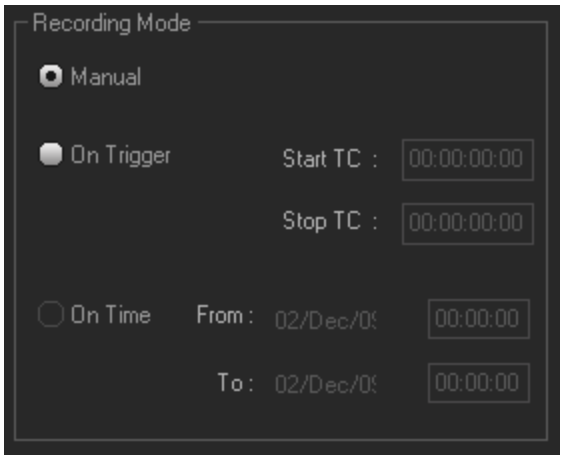
To create an output file, enter the relevant data into the fields displayed in the General tab:

Field	Description
Label	Name you give to the file that will be encoded
Id Feed	Identification given to a feed that could be provided by a press agency
External Ref	Reference which can help to identify the encoded media, such as a barcode from a VTR tape.
Media Class	Class categorizing the media. The classes are defined in the Class Manager of the Xedio Manager application.
Shooting Date	Date on which the media has been filmed. To update the date, click the **Shooting Date** button and select a date in the calendar displayed from the drop-down arrow.
Video Ratio	Video ratio of the encoded media. Possible values: • if the hi-res encoding profile is HD, the only option is **Forced 16:9**. This will obviously be the default value in HD. • if the hi-res encoding profile is SD, the options available are **Auto** (it is automatically detected by the encoder and passed to Ingest Organizer), **Forced 4:3**, **Forced 16:9**. The default value in SD will be the last one used, per channel per user.
Source	Original source of the feed.
Routing	Free text to describe how the feed was routed to the system.
Description	Optional text to describe the encoded media.
Publish	Allows to see the encoded media in the client workstations database lists.

Metadata Tab

In the Metadata tab, the users can select one of the available metadata profiles by clicking in the **Metadata Profile** field. Then, they can enter metadata values for the encoded media.

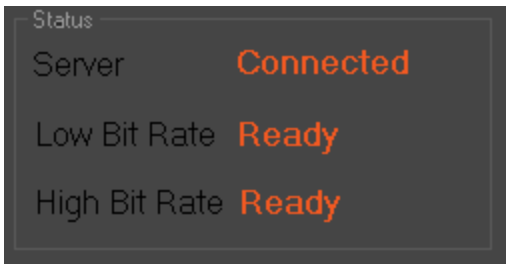
Recording Mode Area



The recording on an encoder from Xedio Ingest Organizer can be started in one of the three following modes:

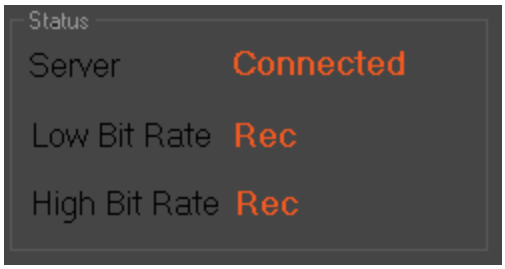
- **Manual**: when you click the **Start Record** button, a dialog box allows you to enter a record duration. The encoding process starts as soon as you click the **Start with Limits** button.
- **On Trigger**: you can enter a start timecode and a stop timecode. The encoding process will start and stop at the specified timecodes.
- **On Time**: you can enter start and stop times and dates for the encoding process. This option is dimmed when the scheduler interface is available.

Status Area



The **Server** status shows if the Xedio Ingest Organizer application is connected by IP to the corresponding Xedio Ingest Server.

The **High** and **Low Bit rate** status show if Xedio Ingest Organizer is communicating with the encoder software for the specified encoder. **Ready** is displayed when the encoder is ready for the recording. During the recording process, **Rec** is displayed.



The **Connect** button allows the user to make the connection manually if the status currently shows a disconnection.

The **Start Record** button becomes active to start the encoding process as soon as the status shows a connected state.

3.2.3. Encoder

Depending on the encoder type, a **Low BitRate Encoder** button and/or **a High BitRate Encoder** button are available.

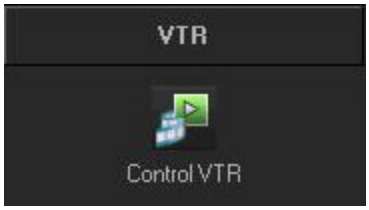
When you click one of the **Encoder** buttons for an encoder device, the following Encoder window is displayed in the Work area, showing information about the encoder and a monitoring output of the current encoding file.

Note
The video shown will only be at a rate
- defined by the GOP structure with the CDM[1] encoders (MPEG2 I frames only will be displayed: about 2 per second) and
- defined by the setup of the system with the CDM[2] encoders.

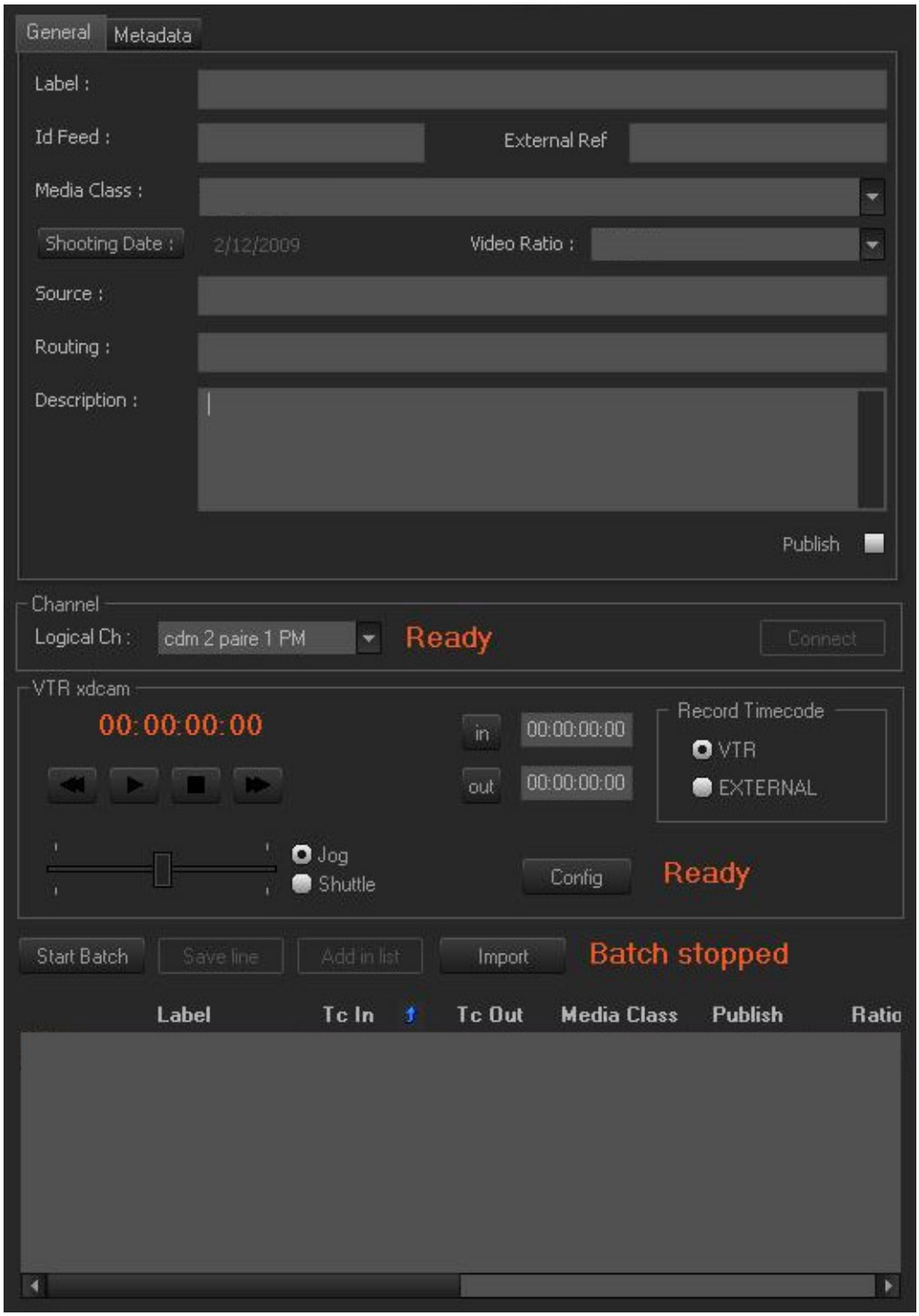
With the CDM[2], only one monitoring at a time can be performed by a user.

3.3. VTR Device

3.3.1. Purpose



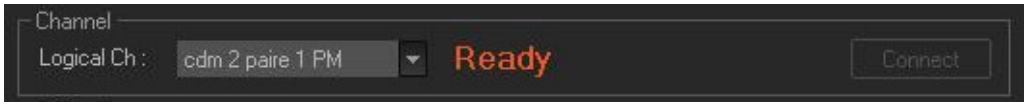
When you click the **Control VTR** button from the VTR category tab, the following VTR window is displayed in the Work area, allowing you to define data for the recorded file, to control the VTR and mark areas of the tape to be ingested.



3.3.2. General Tab and Metadata Tab

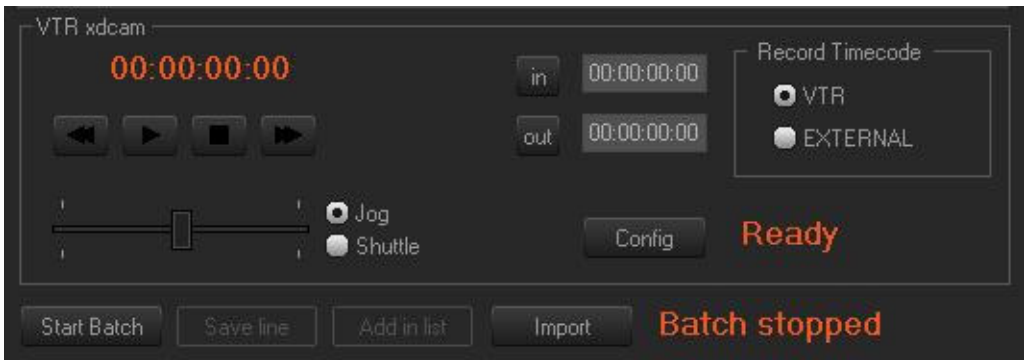
These areas have the same fields as the encoder control window. See sections "General Tab" on page 8 and "Metadata Tab" on page 8 for a description of those areas.

3.3.3. Channel Area



This parameter allows the user to connect to the logical channel that has been assigned to ingest the media from the tape in the VTR. Choose the channel and click the **Connect** button to establish the communication.

3.3.4. VTR Area



The VTR area provides transport buttons to control the VTR as well as **In** and **Out** buttons to mark sections of the tape to ingest.

The **Record Timecode** area allows the user to choose between the existing timecode on the tape or the external source of timecode connected to the encoder when the encoding is performed.

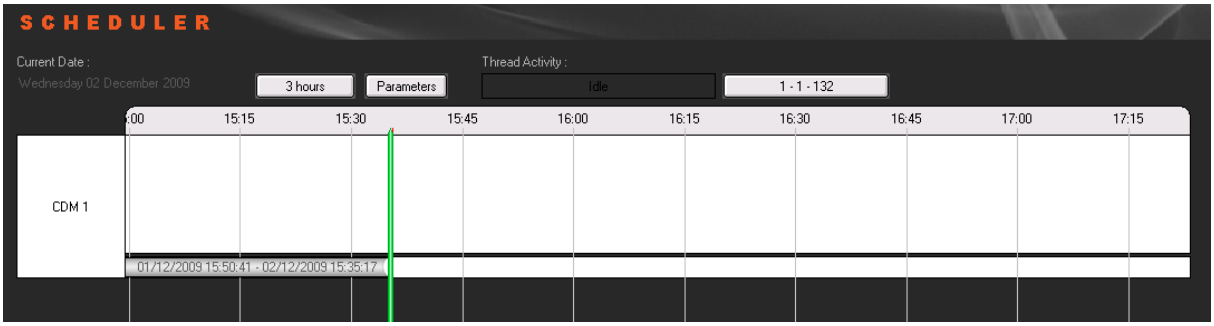
Each area of tape can be determined and added to a list using the **Add In List** button. When the selection from the tape is complete, the ingest is started by clicking the **Start Batch** button.

3.4. Scheduler

3.4.1. Purpose

The Scheduler tab displays a timeline with all the records already encoded, being encoded or scheduled to take place within the displayed time window.

Each logical encoder has its own timeline.



The green line is the nowline and reflects the current time. The thin red line corresponds to the time before which no action can be performed through the scheduler. Ingest media is displayed in the form of blocks in the timeline.

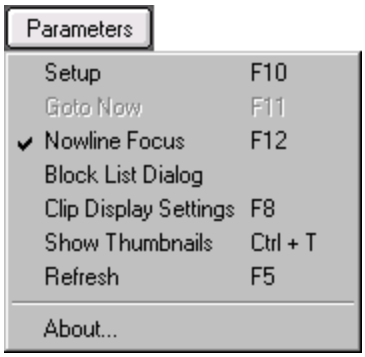
3.4.2. Timeline View Settings

Time Span

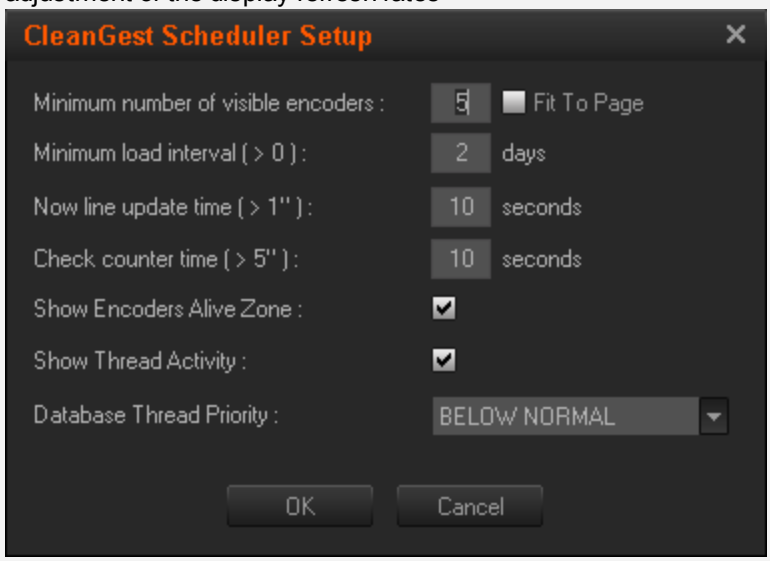
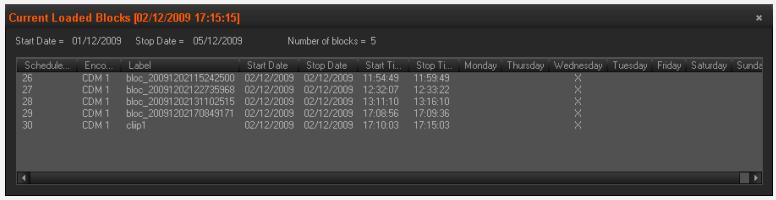
Clicking the **[Time]** button displays a contextual menu:

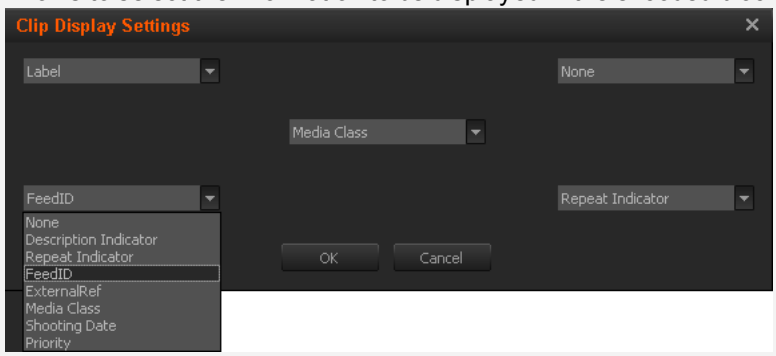
This setting sets the range of time displayed on the timeline. The mouse scroll button may also be used to change this range and zoom in or out the displayed range.

Parameters



Clicking the **Parameters** button displays a contextual menu with the following options:

Menu Items	Meaning
Setup	Gives options for the amount of encoders displayed on screen and the adjustment of the display refresh rates  CleanGest Scheduler Setup Minimum number of visible encoders : 5 Fit To Page Minimum load interval (> 0) : 2 days Now line update time (> 1'') : 10 seconds Check counter time (> 5'') : 10 seconds Show Encoders Alive Zone : Show Thread Activity : Database Thread Priority : BELOW NORMAL OK Cancel
Goto Now	Returns to the current date and time.
Nowline Focus	If this option is selected, the timeline for all encoders is displayed in such a way that the nowline is always centered and only the range of the displayed period can be adjusted. If the option is not selected, the display can be set to show any time period at any date.
Block List Dialog	Displays the list of blocks present in the timeline for a specific period of time: 

Menu Items	Meaning
Clip Display Settings	Allows to select the information to be displayed in the encoded block : 
Show Thumbnails	Shows a thumbnail for the encoding block.
Refresh	Refreshes the graphical interface.
About	Gives information about the version of Ingest Scheduler.

Current Date

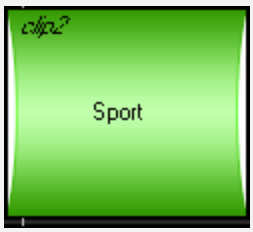
The **Current Date** field allows to select the date for the timeline display. This is only available if the **Nowline Focus** parameter is disabled from the Parameters menu.

3.4.3. Timeline Content

Block Status Colors

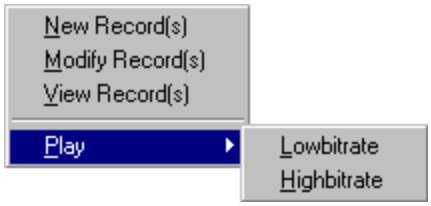
The block status is shown by means of different colors as follows:

Block Color	Status
	A blue block to the right of the nowline is a Scheduled ingest.
	A currently **Recording** ingest is orange.

Block Color	Status
	A green block to the left of the nowline is a successfully Recorded ingest.

Block Contextual Menu

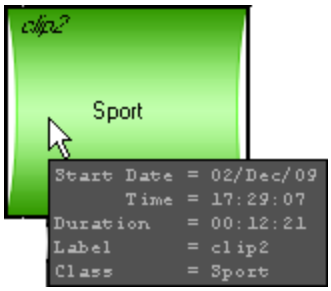
A contextual menu is available when you right-click in the timeline:



Menu Item	Description
New Records	Opens an Edit Mode window allowing you to enter parameters for a new file to encode.
Modify Records	Available when right-clicking on a block. Opens an Edit Mode window allowing you to update the parameters of the encoding file.
View records	Opens a View Mode window showing you the parameters of the encoding file.
Play	Provides a sub-menu with the **Lowbitrate** and the **Highbitrate** options. Selecting one option opens the CleanEdit Player window from which you can view the encoded/encoding block.

Block Tooltip

Some of the metadata associated to an ingest can be easily viewed by placing the pointer over the corresponding block. A tooltip is displayed:



3.5. Recording TC Versus Media TC

The Xedio Ingest server usually pilots two encoders: one in hi-res (EncHi) and one in lo-res (EncLow).

Each encoder creates one Media file: hi-res media file and lo-res media file.

Xedio Ingest sends the recording command to both encoders at the same time. However, according to several parameters, such as the codec, the recording does not start at the same time on both encoders. So, the TC IN and TC OUT of the two Media files will differ. This is absolutely normal and there can be up to 10 seconds between both TC IN or between both TC OUT in some cases.

Once the recording is finished, the Xedio Ingest analyses the TC IN and the TC OUT of each Media file and creates a single Media file corresponding to the material common to both lo-res and hi-res files.

- The Media TC IN will be the highest value between both TC IN.
- The Media TC OUT will be the lowest value between both TC OUT.

This difference can be viewed in a player when TC Intra is displayed.

The recording existed from when the first encoder started until the last encoder stopped. So, in the scheduler:

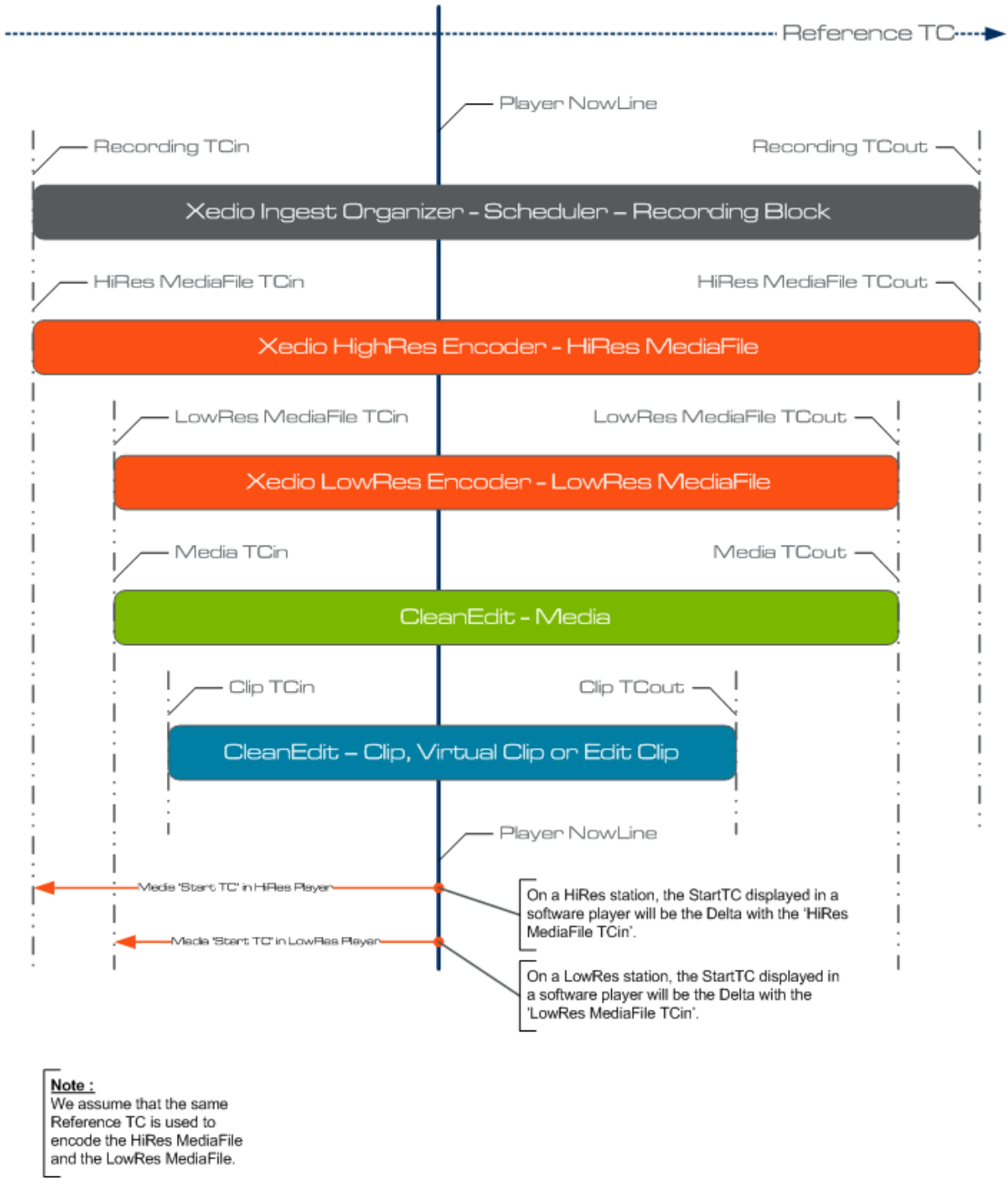
- The Recording TC IN value will be the lowest between both TC IN.
- The Media TC OUT value will be the highest between both TC OUT.

In summary, the duration of one recording is always greater than the duration of the corresponding Media and its Media files. The duration of one Media is always smaller that the duration of its Media files and the corresponding recording.

Additionally, a clip can be created from a media. It will therefore always have its TC IN and TC OUT within the Media TC IN and TC OUT limits.

This is explained in the following diagram.

Xedio Ingest Timecodes Overview


Reference TC
Player NowLine
Recording TCin
Recording TCout
Xedio Ingest Organizer - Scheduler – Recording Block
HiRes MediaFile TCin
HiRes MediaFile TCout
Xedio HighRes Encoder - HiRes MediaFile
LowRes MediaFile TCin
LowRes MediaFile TCout
Xedio LowRes Encoder - LowRes MediaFile
Media TCin
Media TCout
CleanEdit - Media
Clip TCin
Clip TCout
CleanEdit – Clip, Virtual Clip or Edit Clip
Player NowLine
Media 'Start TC' in HiRes Player
Media 'Start TC' in LowRes Player
On a HiRes station, the StartTC displayed in a software player will be the Delta with the 'HiRes MediaFile TCin'.
On a LowRes station, the StartTC displayed in a software player will be the Delta with the 'LowRes MediaFile TCin'.

Note :
We assume that the same Reference TC is used to encode the HiRes MediaFile and the LowRes MediaFile.

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